Energy-related Products (ErP) Directive and the Role of Standardisation in Driving Innovation

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ENERGY-RELATED PRODUCTS (ErP) DIRECTIVE AND THE ROLE OF STANDARDISATION IN DRIVING INNOVATION

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This briefing document aims to provide background to the discussion on role of standardisation in the Energy-related Products (ErP) Directive and its impact on product innovation. It provides a brief overview of the Directive's intent, the process of developing implementing measures to date, and the general outcome of the essential requirements found in the Regulations supporting the Directive.

An introduction to the European Standardisation System (ESS), provides the context to the specific application of harmonized standards with respect to the Directive and its Implementing Measures. The current application of European and other standards in the ErP framework is presented, followed by a general discussion on the suitability of standardisation to drive environmental innovation as implemented to date, and need for further standard development to support the setting of implementing measures.

1. INTRODUCTION

1.1. The ErP Directive

Directive 2005/32/EC of the European Parliament and of the Council establishing a framework for the setting of ecodesign requirements for energy-using products' (the 'EuP Directive') was adopted in July 2005[1]. It has subsequently been repealed by Directive 2009/125/EC ...setting of ecodesign requirements for energy-related products, extending the scope to other products that indirectly impact energy use including for example, building insulation and windows [2].

This European Union (EU) Directive aims at improving the environmental performance of products throughout their life cycle by systematic integration of environmental aspects at the earliest stage of their design.

By introducing EU-wide rules for eco-design, the EU aims to ensure that national regulations do not become obstacles to intra-EU trade. The Directive does not introduce directly binding requirements for specific products, but defines conditions and criteria for setting requirements on a product-by-product basis.

The European Commission sets these product-specific requirements under the EU comitology process, provided that the product group:

- Has a significant impact on the environment;
- Has a high volume of trade in the EU;
- Has clear and significant environmental; improvement potential.

For the purposes of deciding on implementing measures, the Commission is assisted by a Consultation Forum of stakeholders and a Regulatory Committee composed of EU Member State representatives. The European Parliament has a right of scrutiny on implementing measures, which can take various forms, including regulations or voluntary initiatives by industry sectors.

The process of developing and eventually adopting implementing measures has been described as a 4-step process as presented below.

Table 1: Process of Implementing Measure Development

Step 1: Preparatory study to determine whether and which ecodesign requirements should be set: 11-21 months with 1-3 stakeholder meetings to discuss draft chapters
Step 2: Submission of a first Working Document to the Consultation Forum
Step 3: Submission of a refined draft measure to the Regulatory Committee (including an impact assessment and European Commission inter service consultation): usually 3 to 6 months after the Consultation Forum meeting
Step 4: Final adoption by the Commission after European Parliament and Council Scrutiny and WTO notification: 6 to 12 months

To date, regulations laying down implementing measures have been adopted for the following product groups, including several horizontal measures: Circulators [3], Electric Motors [4], Refrigerators and Freezers [5], Televisions [6], External Power Supplies [7], Lighting products in the domestic and tertiary sectors [8],[9], [10], Simple Set Top Boxes [9], Standby and off mode electric power consumption [11]. DG Enterprise and DG Energy has in a mutual publication estimated that the minimum energy performance standards for these nine product groups are equivalent to 12% energy savings in the EU electricity consumption in 2007 – compared to a business as usual case.

Additional implementing measures that are currently under development or being revised include those for PCs and Monitors, Boilers, Water Heaters, Air Conditioners, Ventilation Fans, Commercial Refrigerators, Tumble Dryers, Dishwashers, Tertiary lighting, and Vacuum Cleaners. There are over 10 other product groups which are currently in the preparatory study phase.

In terms of self-regulation, voluntary initiatives have been proposed for 4 product categories; complex set top boxes, printers, machine tools and medical equipment. The endorsement of the voluntary initiative for set top boxes could take place as early as November 2010.

The requirements reflected in regulations to date focus almost entirely on specific measures for energy reduction in the use phase, as the preparatory studies had identified this as the most significant aspect, contributing significantly to green house gas emissions [15, 18]. For some products, aspects relating to materials and hazardous chemicals were also under consideration during the preparatory study phase but did not emerge in the final implementing measures. Instead, the risks from potentially hazardous substances were (usually?) deemed to be affectively addressed through the RoHS Directive and the REACH Regulation . Impacts related to the sourcing and use of materials has been ignored. End-of-life considerations related to choise of materials, recyclability, and reusability are somehow expected to be addressed through the WEEE Directive, but this has not been the case so far, and there are few signs of such developments arising .

1.2. ErP and the New Approach?[1]

Although the ErP Directive is not formally recognized as a New Approach Directive per se, the directive is in accordance with certain principles for the implementation of the new approach as set out in the Council Resolution of 7 May 1985 on a new approach to technical harmonisation and standards and of making reference to harmonised European standards.

This is made explicit in Recital 34 of the ErP Directive and it is further noted that, the Council Resolution of 28 October 1999 on the role of standardisation in Europe recommends that the Commission examine whether the New Approach principle could be extended to sectors not yet covered as a means of improving and simplifying legislation wherever possible [2]. Including this statement in the ErP recitals is essentially providing the justifying for the extension of New Approach principles into environmental policy.

Directives based on this principle specify only the 'essential requirements' for products to comply with to ensure a high level of protection (for health and safety, environmental protection, etc.). The 'essential requirements' must be worded so as to produce binding obligations that can be uniformly enforced by Member States. In the case of the ErP Directive, the essential requirements are outlined in implementing measures included as supporting regulations. The Commission then mandates European Standardisation bodies to define 'voluntary' technical standards that manufacturers may use to conform to in order to place their products on the EU market. If a manufacturer complies with the harmonised standards, its products are presumed to meet the requirements. Manufacturers have a choice regarding demonstrating compliance, either to apply the harmonised standards or show conformance through appropriate documentation.

Directives also lay down conformity assessment procedures for evaluating compliance with the essential requirements, taking into account identified potential risks associated with the product. In line with New Approach directives, the ErP requires that before a product covered by an implementing measure is placed on the market a CE marking shall be affixed and a declaration of conformity issued.

[1] Note: The New Approach has recently been revised and integrated into the New Legislative framework [http://ec.europa.eu/enterprise/policies/single-market-goods/regulatory-policies-common-rules-for-products/new-legislative-framework/index_en.htm], the main principles are however the same as before.

Member States are responsible for market surveillance to ensure non-conforming products are withdrawn from the market.

The ErP Directive differs from New Approach Directives, in that essential requirements are laid out in implementing measures rather than in the Directive itself. New Approach Directives rely on self assessment and certification based on internal production control (Module A) or the mandatory involvement of a European lab (Modules B-H); the risk posed to the consumer is key in deciding what module to apply. Under the ErP Directive, there will be no involvement - either mandatory or voluntary - of any competent or notified bodies in the pre-market assessment of conformity to ErP. It is based entirely on self assessment and certification. However, notified bodies may be appointed in Member States to assist during the post market surveillance enforcement activity. The implementing measures usually outline the conformity assessment procedures options available to manufacturers and verification measures for market surveillance by Member States.

2. STANDARDISATION

Standardisation is a crucial but often neglected factor for innovation and economic development. Standards may be of different types (product standards, process standards, management standards, measurement standards, and so on) and may differ in terms of coercion (e.g. mandatory, voluntary, semi-voluntary) [19]. Standards may both hinder and aid innovation, depending on the circumstances [20]. They are however often very important - even crucial – for product and service development as they provide a platform for innovative activities and international transfer of technologies. Most actors agree that the European standardisation system has been crucial in removing technical barriers to trade, and has played a vital role in ensuring the free movement of goods between Member States (a key objective of the ErP Directive). The international standardisation system has been even more crucial in removing barriers to trade. Regarding standardisation projects initiated by the Commission, there are documented cases of both successes and failures [20].

2.1. Standardisation in the European Context

The regulatory framework for standardisation in Europe essentially consists of three pieces of legislation [12]. Directive 98/34/EC provides for a system of transparency and notification which obliges National Standards Organisations (NSOs) to inform the Commission, European Standards Organisations (ESOs) and other NSOs when they are preparing or planning to amend an existing national standard. The Directive designates three European Standardisation Organisations (ESOs) (CEN, CENELEC and ETSI) and NSOs which are listed in the Annexes as actors in standardisation development. The Directive provides for the mechanism allowing the Commission with assistance of a Regulatory Committee to request ESOs to draw up a European standard within a given time limit.

Secondly, although they are private organisations, ESOs are considered to be bodies pursuing an objective of general European interest and therefore, the three ESOs are also partly financed by the European Union pursuant to Decision 1673/2006/EC7. Thirdly, the legal framework of standardisation is completed by Council Decision 87/95/EEC8 in the Information and Communications Technology (ICT) sector.

As noted in the Commission's White Paper on Modernisation ICT Standardisation in the EU, standardisation in this sector has dramatically changed over the last decade [13]. In parallel to the traditional standard stetting organisations, specialised and mostly global fora and consortia[2] have become more active with several emerging as world-leading ICT standards development bodies. This development is not however reflected in the EU standardisation policy. Fora and consortia standards cannot currently be referenced, even if they could be of benefit in helping to achieve public policy goals. According to the Commission, without decisive action the EU risks becoming irrelevant in ICT standard setting which will take place almost entirely outside Europe, and without regard for European needs.

2.2A Definition of European Standards

A standard, as defined in Directive 98/34/EC is a technical specification approved by a recognised standardisation body for repeated or continuous application, with which compliance is not compulsory and which is one of the following:

- international standard - a standard adopted by an international standardisation organisation and made available to the public;
- European standard - a standard adopted by a European standardisation body and made available to the public, and;

[2] CEN maintains a list of standards related fora and consortia at http://www.cen.eu/CEN/sectors/sectors/isss/consortia/Pages/default.aspx#i

- national standard - a standard adopted by a national standardisation body and made available to the public.

Given the above, the application of harmonised standards in the European context of standardisation would not include legal limit or threshold values (for efficiency, resource use, etc.) set in mandatory legal instruments. As this briefing focuses on the role of standardisation in relation to the ErP Directive, the role of regulatory standards (minimum requirements) used in the ErP Directive, shall be only indirectly discussed.

2.3 Harmonised Standards

Harmonised standards are European standards, which are adopted by European standards organisations (ESOs), prepared in accordance with the General Guidelines agreed between the Commission and the European standards organisations. The development of standards follows a mandate issued by the Commission after consultation with the Member States.

Standards mandated under the New Approach are first adopted by the relevant standards body following their own internal procedures. The standards adopted by the European standards bodies do not become part of formal legislation, incorporated into a Directive (or supporting Regulations in the case of ErP) with the explicit approval of the Member States, but are recognised by the Commission in a Communication published in the Official Journal. The Commission may however come to the conclusion that a proposed standard does not fulfil the requirements, and ask the ESO to submit a new proposal. The standard will not be published in the Official Journal if it does not fulfil the requirements. The provisions of the underlying Directive presume that goods produced in line with the harmonised standards published in the Official Journal conform with the essential requirements of the Directive.

3. CURRENT USE OF STANDARDISATION IN THE ErP

Leading up to the introduction of the EuP Directive there was a considerable amount of criticism from environmental NGOs regarding the use of standardisation in environmental policy. NGOs questioned the integrity of mandating standardisation bodies to develop harmonised standards as these organisations are often industry dominated, lack public accountability, democratic procedures and effectively exclude non-commercial interests [14]. This is part of a bigger debate on the potential and pitfalls of delegated decision-making in the EU [21, 22, 23] and the power to set different types of standards [19].

The Commission has recognised the legitimacy of this concern and has taken a number of concrete actions to address them. For example, it awarded a service contract to ECOS[3] to coordinate the work of NGOs into the standards development process both at EU institutions and standardisation bodies. ECOS has been an associate member of CEN since 2003 and a co-operating partner of CENELEC since 2005. ECOS is also a "liaison organisation" to (currently four) technical bodies (TCs and PCs) of ISO and IEC. In addition CEN has developed and environmental help desk provides technical advice to standard writers through networks of environmental experts, financially supported by the Commission. CENELEC has developed an Environmental Database that will pool all environmental aspects dealt with by CENELEC and will help to give access to environmental knowledge.

NGOs also had considerable concern over the suitability of extending the New Approach to environmental legislation, because of the way it had been implemented to date with respect to health and safety issues, and experiences gained in the field of packaging waste. While the basic idea was that all "political" aspects should be settled by the political processes prior to the standardisation work phase, some degree of political decision like limit or emission values or similar parameters, have in many cases been left to the standardising process.[4]

Given the above, Recital 32 of the ErP Directive notes that one of the main roles of harmonised standards should be to assist manufacturers in applying the implementing measures adopted under the Directive and that standards could be essential in establishing measuring and testing methods that can be used to illustrate conformance with specific ecodesign requirements.

In the case of generic ecodesign requirements, the Commission notes that, harmonised standards could contribute considerably to guiding manufacturers in establishing the ecological profile of their products in accordance with the requirements of the applicable

[3] European Environmental Citizens Organisations for Standardisation

[4] As the politically established requirements must be made concrete also at the "technical" level, and the technical requirements and the potential for measurement and validation of compliance are closley related, the issue is quite complex.

implementing measure. These specific and generic requirements should clearly indicate the relationship between their clauses and the requirements dealt with [2]. The Commission is clear that the purpose of harmonised standards should not be to fix limits for environmental aspects.[5]

3.1. Specific Ecodesign Requirements

As discussed earlier, specific ecodesign requirements in implementing measures proposed or included in regulations adopted to date, have almost entirely been limited to energy efficiency requirements. Results of the MEEuP, conducted in the preparatory studies have consistently identified energy use in the use phase as the most significant environmental aspect of the product life cycle. While there has been some criticism of the emphasis placed on use phase energy, this has largely been ignored. Therefore, with respect to the use of voluntary European standards to illustrate conformance with specific ecodesign requirements, this has been limited to the use of measuring and testing procedures for energy efficiency of ErPs.[6]

What about the case of chargers – the discussion in EuP of the materials aspects and the waste of resources was part of the reason for voluntary agreement resulting in one common standard for chargers… Could this have been part of the specific (or generic) requirements that such standard should be made?

3.2. Generic Ecodesign Requirements

The application of generic eco-design requirements in implementing directives is laid out in Annex 1. Generic ecodesign requirements aim at improving the environmental performance of ErPs focusing on significant environmental aspects thereof without setting limit values.

When laying down generic ecodesign requirements, the Commission will identify as appropriate to the ErP covered by the implementing measures, the relative environmental parameters[7] listed in Part 1, the manufacturers requirements relating to the supply of information that may influence the way the ErP is handled, used or recycled listed in Part 2, and the requirements for the manufacturer listed in Part 3. Part 3 includes the requirement of a manufacturer to conduct an assessment of the Energy-related Product throughout its life cycle, develop an ecological profile of the ErP, and evaluate alternative design solutions and benchmark the chosen design achieved against best performing products.

While some generic ecodesign requirements remain in the final implementing measures, these are mostly concerned with the supply of information to consumers with respect to correct operation of the ErP in the use phase as well as parameters that are related to product performance and energy efficiency. There are some exceptions, including the requirement that the amount of mercury in milligrams be presented on the product or its packaging, in the case of domestic lighting.

However, there are no adopted or draft implementing measures that require manufacturers to perform an assessment of the ErP through its life cycle, to develop an ecological profile, or to evaluate alternative design solutions and the expected performance of these alterations against benchmarks. Despite the lack of uptake of generic ecodesign requirements in the implementing measures to date, there are several normative standards developed (e.g. by IEC) which could potentially be referenced or used to develop European standards, especially in relation to assessments to be conducted by manufacturers. These are discussed in Section 4 below.

As generic ecodesign requirements have not been applied as initially expected, it is perhaps time to raise the question if we need to develop the whole concept of generic requirements; further analyse how manufacturers and importers can show compliance with such rules, and; how the monitoring of legal compliance should be performed.

3.3. Conformity Assessment

Harmonized European and International standards may also play a role assisting manufacturers to

[5] The issue is controversial; some industry actors believe that this requirement can inhibit the potential for standardisation to achieve positive outcomes.

[6] However, the requirement from the Commission that mobile phone companies must standardise chargers - to allow consumers to use the same charging device should they swap phones – was partly motivated by resource use considerations. This lead to a voluntary industry agreement. The ESOs have received a common standardisation mandate to aid the process [European Commission. Standardisation mandate to CEN, CENELEC and ETSI on a common Charging Capability for Mobile Telephones. M/455 EN. 1 October 2009]

[7] As an example, Part 1 (1.3) lists parameters such as the weight and volume of the product, use of materials issued from recycling activities, consumption of energy, water and other resources throughout the life cycle, ease of reuse and recycling expressed through a variety of metrics including time necessary for dissassembly. Others include emissions to air,water and soil.

demonstrate compliance with implementing measures. In line with New Approach directives, a 'conformity assessment', which ensures that a product fulfils the essential requirements in an implementing measure, must be performed before an EuP can be placed on the market.

Article 8, and Annexes IV-V, provide the framework for this, with the conformity assessment procedure specified in the applicable implementing measure, and provides the manufacturer, representative or importer with two choices, namely an 'internal design control' or the use of a management system.

The procedure for internal design control is described in Annex IV, and is mainly concerned with the creation of a technical documentation file and its main content. Annex V describes the use of management systems to prove conformance and the necessary elements of the management system.

Article 8(2) states that if an ErP is designed by an organisation that has an EMAS registration, and the design function is included in the registration, the management system shall be presumed to comply with Annex V. Further, Article 8(2) states that the same presumption is given also to other management systems if their reference numbers have been published in the Official Journal.

Therefore, in addition to EMAS registered organisations, manufacturers with ISO 9001 and ISO 14001 management systems are sanctioned to use them as tools for conformity assessment, as these standards are referenced in the Official Journal.

4. DISCUSSION

Regarding NGO concern over ErP implementing measures relying on standardisation bodies to determine the level of environmental protection in the standardisation process, it seems that the Commission has been diligent in ensuring that the essential requirements are clearly decided during the political process. In most cases the specific minimum efficiency levels, and the corresponding methods for measuring the energy consumption or water consumption, are specified within the specific ecodesign requirements found in the respective implementing measure. This has entailed considerable work on the part of the Commission, for issues which in the traditional application of the New Approach Directives may have been left up to ESOs to determine.

As a result, it is not surprising that the mandates that the Commission has issued (or is planning to issue) to ESO's for standard development are primarily concerned with developing procedures and methods for measuring energy and water consumption and functional efficiency and formatting of test reports.

4.1 Specific Ecodesign Requirements

Energy use in the product use phase has theoretically the least uncertainty in terms of measurement and testing protocols for product performance assessment. There are existing standards developed by international and European standardisation bodies that can be used by consultants performing preparatory studies and the European Commission to develop minimum requirements. While in some cases these standards need revising, then in general minimum requirements on the energy usage of appliances are well known. The same cannot be said for aspects other than energy efficiency, such as measuring the level of recyclability or reparability, for example [15].

Despite this, there are certain examples of existing standards covering ErPs, developed by fora and consortia that do address aspects other than energy or water efficiency in the use phase. For instance, IEEE 1680 – EPEAT is a standard (for personal computers and monitors) or soon to be family of standards (other electronics to be considered) that includes a measurement standard for determining whether a product meets design for shredding criteria in EPEAT[8] [16].

Although it is recognised that neither the current legal framework of European standardisation, nor the rules on public procurement allow referencing of such fora and consortia in regulations of public policies, the Commission itself suggests enabling the referencing of specific fora and consortia standards in relevant EU legislation and policies subject to a positive evaluation of the standard and the forum or consortium processes with regard to openness, consensus, balance and transparency. The Commission also recommends promoting better cooperation between fora and consortia and ESOs on the basis of a process which would lead to standards issued by the ESOs [13].

[8] In order to satisfy this requirement manufacturers must eliminate the use of paint or coatings that are not compatible with recycling or reuse. The specific product criterion states that: Plastic parts > 100g on a product shall not contain paints or coatings that are not compatible with recycling or reuse, including metal coatings. EPEAT defines compatible in this context as the following: Paints and coatings on plastic parts are proven to be compatible with recycling processes if they do not significantly impact the physical/mechanical properties of the recycled resin. Significant impact is defined as >25% reduction in notched Izod impact at room temperature as measured using ASTM D256.

The IEC standards are international standards, developed to provide assistance to manufacturers and other actors. . IEC has a number of existing standards of relevance, both relating to guidance and compliance with requirements, e.g.:

- IEC 62430. Environmentally conscious design for electrical and electronic products
- DD IEC/PAS 62545:2008. Environmental information on electrical and electronic equipment (EIEEE)

More IEC standards are under preparation, e.g.:

- IEC 62474. Material declaration for products of and for the electrotechnical industry
- IEC/TS 62650. End of Life information exchange for electrotechnical equipment between manufacturers and recyclers

The IEC standards will however not apply to all product groups that will be regulated through the ErP Directive, and they will probably not cover all relevant aspects. Further, there is currently no "links" between the IEC standards and the implementation of the ErP Directive. However, if more generic requirements are to be used under the ErP Directive, the IEC standards could perhaps form a base for further standardisation efforts by ESOs.

An issue that needs to be investigated further concerns the need for new European standards that deals with issues such as design for shredding and recyclability, toxicity, material choice and other issues which have generally been neglected in the current process of setting IMs. Such standards may be necessary in order to set new types of requirements, as well as to show compliance with them.

4.2 Generic Ecodesign Requirements

Historically, the drafts for the EEE Directive, which preceded the EuP Directive and now ErP Directive, had an approach to embedding life cycle thinking and eco-design that is quite different from the one envisioned in the final EuP Directive. In the EEE Directive, the main vision as outlined in the text was that manufacturers should make a (simplified) LCA, create an ecological profile, and use this for prioritisation of design solutions. The EEE text made it possible for the Commission to implement mandatory measures, but the impression given was that this would be the exception rather than the rule. In other words: the EEE Directive would have been effective in forcing manufacturers to collect life cycle data and actively pursue eco-design measures, while it would have not required manufacturers to reach absolute performance standards. This means that the proposed EEE Directive was, potentially, a good instrument for integrating life cycle thinking in companies, while the effectiveness, in terms of concrete environmental improvements, would not have been guaranteed [17].

With the subsequent introduction of the EuP Directive Draft, including the amendments made, the situation for the ErP Directive is rather the opposite. It is the role of the Commission and the Regulatory Committee to make use of LCA methodologies to identify the most significant impacts and develop implementing measures to address the significant impacts. As implied by the wording of the ErP Directive, manufacturers are only obliged to work with those aspects identified as significant when making the ecological profile. In fact implementing measures to date have not required manufacturers to do any assessments of their products or to develop an ecological profile of their product designs and compare these to best practice benchmarks. This indicates that the ErP Directive will not be as effective at integrating life cycle thinking among manufacturers as the EEE Directive would have been if enacted. Therefore, some of the 'pedagogical' elements, which would have forced manufacturers to learn more about their life cycle impacts and eco-design options, have been lost. In terms of product innovation, this is quite unfortunate [17].

In the preparatory study for televisions, the consultants recommended that TV manufacturers should conduct an assessment of their products based on the ECMA 341 or IEC 62430 standards, which are essentially checklists for general design practices that designers need to consider when designing new products [van Rossem et al.]. The motivation provided was that this requirement would force TV design teams to consider relevant environmental aspects which cannot be addressed by specific ecodesign requirements. This requirement was subsequently dropped, however. Industry stakeholders have expressed support of the use of such standards, but stated that there are uncertainties regarding how a manufacturer would document and demonstrate compliance with such a standard, including test results [15].

There are several issues that need to be discussed in connection to the above. These include whether generic ecodesign requirements which provides reference to standards for ecodesign are appropriate from a legal perspective. An associated question concerns whether only ESO standards should be used

for this purpose, and if there are needs to develop specific European and/or international standards.

An associated issue concerns whether generic requirements connected to ecodesign or supply of information should be set under IMs under the ErP Directive, or if we need a Directive that sets general requirements regarding these issues for all product groups on the market, similar to the product Safety Directive. A Framework Directive on the Environmental Soundness of Products, with features on the Product Safety Directive has been discussed in several reports [24, 23]. One benefit of such a Directive, i.e. a horisontal legislation regarding the environmental performance of products, is that environmental protection would gain more importance in voluntary standardization [25, 23].

5. SUMMARY

Considering that standardisation mandates and the subsequent development of harmonised standards are dependent on the politically agreed essential requirements found in the implementing measures it is not surprising that standards to be developed under the ErP Directive have been limited to procedures for testing and measurement of product aspects associated with energy and water consumption and in certain cases product performance as it relates to efficiency.[9]

While this is positive from the perspective of ensuring that standardization bodies are not provided undue powers to set limits for other environmental aspects such as chemicals and materials in products that impact additional life cycle phases, it does limit the contribution that harmonized standards can provide to reducing the life cycle impacts of products. In other words, the contributions that standardisation can make to environmental product innovation are limited by the scope of implementing measures. The existing standards – IEC 62430 – could be used to prove conformance with generic ecodesign requirements, but so far few generic requirements have been set.

A new, horizontal mandate for the ESOs are planned byt the Commission. This would mean that the ESOs are involved earlier in the process, and the time for preparing standards are shortened. If the relevant technical committees in IEC/ISO were active already during the preparatory studies, this could potentially improve both the regulatory process and standardisation processes.

Implementing measures could potentially address many more environmental aspects than just energy use and other resource use in of the product. This is especially the case since other instruments such as the WEEE Directive on the take-back and end-of-life management and the RoHS Directive restricting the use of hazardous substances in EEE are not achieving their objectives satisfactorily. However, to define specific target levels for the reusability, recyclability and recoverability of EEE in the absence of appropriate measurement standards would be time-consuming for the Commission and the Regulatory Committee. This stresses the importance of the role of European standardisation bodies in developing measurement standards for these aspects.

While for the most part theses standards are non-existent today, this does not restrict the Commission from issuing a Mandate to ESOs to begin this work. This could be coordinated through the relevant international organizations such as IEC and could take into account relevant work that has begun in this area (e.g. IEEE EPEAT standard mentioned above).

With respect to the generic ecodesign requirements in terms of obligating manufacturers to systematically review the environmental performance of their products, develop an ecological profile, and show improvements over successive product releases, existing environmental voluntary standards should be further explored as this has the potential to harness innovation in firms.

With the review of the ErP Directive scheduled for 2012, and requirement to review the effectiveness of the methodology for the identification and coverage of significant environmental parameters, there is an opportunity to review the underlying assumptions in the MEEUP methodology. With respect to the role of standardisation, the Commission may wish to consider the already existent international standards for conducting Life Cycle Assessments (LCA) if modification of the existing methodology is justified.

Regardless, of whether or not other life cycle stages are identified as significant in terms of the overall impact of EuPs (especially relevant for products with semiconductor components) the Commission may wish to consider updating existing implementing measures to address environmental impacts from life cycle phases other than energy in the use phase, especially when other regulatory and voluntary

[9] For some ErP lots, IEC had already developed relevant standards, which in practice formed the base for implmenting measures proposed under the ErP Directive. Thus, international standardization can be in some cases be used as "the standard" for ErP processes.

instruments are failing to meet their intended objectives.

8. REFERENCES

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[5] Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances (Text with EEA relevance)

[6] Commission Regulation (EC) No 642/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for televisions (Text with EEA relevance)

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